Project #4
Due Sunday 2/22/2015 by 11:59 PM
No delay is accepted
For each day late submission 2 points penalty is incurred.
Post your answer in the folder *Project 4 on the blackboard*.
If you have any question please email me at mbadii@pace.edu

Note: Do not email me your project for grading. Only email your project to me when you need help and have questions. In this case attach your project and describe what your questions are.

For this week project I am asking to implement two scripts from the exercises in lecture 4. Copy and paste your program under the word: *Answer*.

1. (This is Exercise 2 in lecture 4): Complete the function: *f* in the following script to return the result of 2 to the power of n. For example, if the random number generated is 3 the function should return 2^3 which is 8. Your script should display the returned value. For example for 2^3 the display output should be:

The random number is 3
The result of 2 to the power of 3 is 8

You must not use any document.write(….) in the body of function.
Do not use Math.pow

```html
<html>
<head>
      <title>Exercise 2</title>
</head>
<body>
<script type="text/javascript">
  function f(n)
  {
    //You need a for-loop
    return ….;
  }
  var n = Math.round(1 + Math.random()*9);
  document.write("The random number is " + n + "<br>");
  var result = f(n)
  document.write("The result of 2 to the power of "+n +" is: "+result);
</script>
</body>
</html>
```

The following is the result of one execution of my script. The random number generated in this round was 4. Yours should be similar:

The random number is 4
The result of 2 to the power of 4 is 16

Hints: When you like to multiply some numbers you need to define a variable and initialize it by 1. You also need a for-loop in the body of the function.

Answer:

```
<html>
<head>
   <title>Project 4</title>
</head>
<body>

   <script type="text/javascript">

   function f(n)
   {
      var result = 1;
      var i;
      for(i = 0; i < n; i++)
      {
         result = result * 2;
      }
      return result;
   }

   var n = Math.round(1 + Math.random() * 9);
   document.write("The random number is " + n + "<br>");
   var result = f(n)
   document.write("The result of 2 to the power of " + n + " is: " + result);

   </script>

</body>
</html>
```

2.
```
<html>
<head>
      <title>Example 11</title>
</head>

<body>
<label>Name: </label>
<input type="text" name="nameBox" value="" size="20"><br>
<label >Income: </label>
<input type="text" name="incomeBox" value="" size="20"><br>
```

```html
<label>TaxRate:      </label>
<input type="text" name="taxRateBox" value="" size="20"><br>
<input type="button" value="Click Me" size="20" onclick="x.f()"><br>

<script type="text/javascript">
  function f()
  {
  }
</script>
</body>
</html>
```

Answer:

```html
<html>
<head>
   <title>Example 11</title>
</head>

<body>
   <form>
     <label>Name: </label>
     <input type="text" name="nameBox" value="" id = "nameBox" size="20"><br>
     <label >Income: </label>
     <input type="text" name="incomeBox" value="" id = "incomeBox" size="20"><br>
     <label>TaxRate:      </label>
     <input type="text" name="taxRateBox" value="" id = "taxRateBox"
size="20"><br>
     <input type="button" value="Click Me" size="20" onclick="f()"><br>

   </form>

   <script type="text/javascript">
   function f()
   {
       var netValue = incomeBox.value - incomeBox.value * taxRateBox.value;
       alert(nameBox.value + " net income is " + netValue.toFixed(2));
   }
   </script>
</body>
</html>
```